WHAT IS CLAIMED IS:

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1. An XDSL communication system, comprising:

a plurality of twisted pair data lines;

a plurality of subscriber systems coupled to the
plurality of twisted pair data lines, each subscriber
system having an associated availability guarantee value;

a first pool of modems having a first number of XDSL
modems;

a second pool of modems having a second number of
XDSL modems; and

a communication server coupled to the plurality of
subscriber systems, the first pool of modems and the
second pool of modems, wherein the communication server
selectively couples a subscriber system, in response to a
request for service, to an available modem in either the
first pool of modems or the second pool of modems based
upon the availability guarantee value associated with the
subscriber system.

2. The communication server of Claim 1, wherein a
first ratio of a number of subscriber systems having an
availability guarantee value specifying the first pool of
modems to the first number of modems is smaller than a
second ratio of a number subscriber systems having an
availability guarantee value specifying the second pool
of modems to the second number of modems.

3. The communication server of Claim 2, wherein
the first ratio is equal to one.

4.   The communication server of Claim 2, wherein the availability guarantee value of subscriber systems can be modified.

5   5.   The communication server of Claim 4, wherein the modified availability guarantee value is modified for a single subscriber session.

6.   The communication server of Claim 4, wherein

10   the modified availability guarantee value is modified for a predetermined time period.

7.   The communication server of Claim 4, wherein modems are allocated between the first pool of modems and

15   the second pool of modems in response to modified availability guarantee values.

8.   A method for performing an inactivity time-out in an XDSL communication system, comprising:

receiving a request for service from a subscriber;

coupling the subscriber to an available modem in a
5   modem pool to create a subscriber session, wherein the subscriber session establishes a subscriber link between the subscriber and a network device;

detecting a time period of inactivity by the subscriber;

10   when the time period of inactivity exceeds a first inactivity threshold, generating a time-out condition;

placing the subscriber session in a soft-termination state based on the time-out condition, wherein placing the subscriber in a soft-termination state releases the
15   modem but maintains the subscriber link;

detecting activity on the subscriber link;

coupling the subscriber to an available modem in the modem pool; and

canceling the time-out condition such that the
20   subscriber is removed from the soft-termination state.

9.   The method of Claim 8, wherein the first inactivity threshold is based on a level of service of the subscriber.

25

10.   The method of Claim 8, further comprising:

receiving a request from the subscriber to modify the first inactivity threshold; and

51

modifying the first inactivity threshold based on the request.

11.   The method of Claim 10, wherein modifying the first inactivity threshold comprises modifying the first inactivity threshold for a predetermined time period.

12.   The method of Claim 10, wherein modifying the first inactivity threshold comprises modifying the first inactivity threshold until the first subscriber session is terminated.

13.   The method of Claim 8, wherein placing the subscriber session in a soft-termination state comprises disconnecting an internal physical layer with respect to the subscriber session while maintaining the subscriber session from perspectives of the subscriber and the network device.

14.   The method of Claim 8, wherein placing the subscriber session in a soft-termination state further comprises:

detecting a continued time period of inactivity by the subscriber;

when the continued time period of inactivity exceeds a second inactivity threshold, generating a disconnect condition; and

terminating the subscriber session based on the disconnect condition.

52

15.   The method of Claim 14, further comprising:

receiving a request from the subscriber to modify the second inactivity threshold; and

modifying the second inactivity threshold based on

5   the request.

16.   The method of Claim 15, wherein modifying the second inactivity threshold comprises modifying the second inactivity threshold for a predetermined time

10   period.

17.   The method of Claim 15, wherein modifying the second inactivity threshold comprises modifying the second inactivity threshold until the subscriber session

15   is terminated.

18.   A method for dynamically allocating network
addresses in an XDSL communication system, comprising:

receiving a request for data service from a
subscriber;

5   coupling the subscriber to an available XDSL modem
in a modem pool to create a subscriber session;

assigning the subscriber session a network address
from a set of assignable addresses;

removing the assigned network address from the set

10   of assignable addresses; and

when the subscriber session is terminated, returning
the assigned network address to the set of assignable
addresses.

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